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WHY SOW LESPEDEZA

A radio talk by Dr. E. A. Hollowell, Bureau of Plant Industry, delivered in the Department of Agriculture period of the National Farm and Home Hour, Tuesday, November 14, 1933, and broadcast by a network of 48 associate NBC radio stations.

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Lespedeza is a comparative new comer as a farm crop. The grains are as old as our civilization and the clovers have been grown for several hundred years. On the other hand, the real agricultural history of lespedeza dates back about half a century and only in the last ten years have farmers begun to realize the importance of the crop.

Many men still ask, Why sow lespedeza -- what will the lespedezas do for the Southern farmer and to a lesser extent for the Corn Belt farmer?

Well, the answer is-- Because the lespedezas are legumes useful for hay, pasturage, soil improvement and the prevention of soil erosion. In a future talk Mr. Vinall will discuss the value of lespedezas as forage, so today I shall speak of their value for soil improvement, and in erosion control and I shall discuss briefly the varieties of lespedeza now in use in the United States.

The annual lespedezas have proved of value as soil improvers. Here are a few experiences of farmers that show how they have succeeded in building soil. In Kentucky a field that had been 3 years in lespedeza yielded 35 bushels of wheat per acre. The same season wheat on similar land where no lespedeza had been grown yielded 18 bushels per acre.

In Tennessee a field that had produced 3 bales of cotton on 15 acres was put into a rotation of two years lespedeza and one of cotton. After a few years 12 acres of this field produced 16 bales and that with less than half the fertilizer used to make the three bales on 15 acres.

In North Carolina lespedeza was seeded on oats in the spring of 1929 and came again when oats were seeded in 1930 and 1931. The oat yields were-- 1929, 23 bushels; 1930, 43 bushels; and 1931, 77 bushels per acre. Another farmer in the same North Carolina county following a similar rotation from 1928 to 1931 harvested the following yields of oats--1928, 28 bushels; 1929, 48 bushels; 1930, 69 bushels; and 1931, 81 bushels. In Iredell county, North Carolina, cotton yields have increased from 1/4 bale to 1 bale per acre after three years of lespedeza.

Now let's admit that these records were not scientifically checked and that differences in weather between different growing seasons may have caused some of the differences in yield. Even so, the fact remains that experiences like the ones I have mentioned are common. The results are generally good. There is no doubt that introducing lespedeza into the rotation in regions where it grows well, will cause substantial increases in yields of corn, cotton or small grain.

But the practical man still wants to know-- Will it pay me to use lespedeza for soil improvement? I can not pretend to give you exact figures of costs and returns since both may vary from year to year. But suppose a farmer pays 10¢ a pound for lespedeza seed and sows 25 pounds per acre on grain. His entire cash outlay is \$2.50 per acre. Suppose, further, he leaves the field for two years without other return than the first grain crop and then puts it into cotton and harvests 1/2 bale per acre more than he would have done if he had not



grown lespedeza. When at a low price, this extra half bale will be worth \$15 to \$20, a right substantial profit on the investment of \$2.50 two years before.

While this is merely a suggestive example it shows that even when lespedeza is used as a soil improver alone it will pay the Southern farmer to use lespedeza "for the land's sake."

But what about erosion? As you all know thousands of acres are being ruined every year by the washing away of soil from bare fields and from fields in cotton and corn. At the Soil Erosion Station at Statesville, North Carolina, in 1931 a bare field lost nearly 65 tons of soil per acre; a field in corn about 17; one in cotton about 12. The average loss from two plots in lespedeza was 1.5 tons. The plot having the best stand of lespedeza lost only 0.8 tons. It does not take much figuring to see in how few years most of the top soils will be gone from land left bare or constantly planted to corn or cotton. Therefore, the seeding of slopes to lespedeza is a wise practice. If a man has to use part of this land later on, he can cut down erosion by leaving strips of volunteer lespedeza 8 to 10 feet wide. These will stop soil washing, as H. H. Bennett has often told you, and the lespedeza grown on them can be used for hay or seed production.

A word about varieties. Because of its earlier maturity Korean is best for Kentucky northward and in Western North Carolina. In many places in Kentucky, Virginia and North Carolina, Kobe also does well. Korean should not be used at all south of the mountains of North Georgia. Kobe and Tennessee 76 are varieties of common and are the best varieties from Kentucky southward. On fair land they will outyield common or Korean. Except in an occasional season they will mature seed as far north as Northern Kentucky. Tennessee 76 is the latest variety. While the best variety where it matures, it is too late for northern Kentucky.

For very poor land there is nothing better than old-fashioned common or Jap. Northern grown seed will establish stands as far as central Indiana. Common or Jap seems to hang on better than Korean on poor soil.

There are extra early strains of Korean and of common. Some of them, will mature as far North as central Vermont. For example the Harbin, an early Korean. It may be useful as a midsummer grazing plant but experience with it is still too limited to warrant recommending it except on a small scale. When seeded in rows on good soil the plants of this early strain have reached a height of 12 to 16 inches or more but in broadcast seedings growth is always less, and it can not be assumed that seeded for pasturage the plants will do so well as they do in rows. An early variety of common has made seed as far north as Ames, Iowa, but has not yet been used for grazing.

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